RHOMBERG RAIL
COMPANY PROFILE

INNOVATIVE RAIL SOLUTIONS
FULL SERVICE PROVIDER
SLAB TRACK INDUSTRY LEADER
Fairness

We do the right things right. In order to do so, we strive for the success of our clients and partners by optimizing resources (such as time, money and energy) and always giving our best.

The relationship with our fellow employees, customers and partners is sincere, open and honest. Our work and decisions are transparent and just. We value people, treat everyone with respect, and without prejudice. We share our knowledge, own up to our mistakes and learn from them.
We accept and respect all people and base our assessments on conduct and performance. By being tolerant, we can capitalise on differences that are present in the work environment and make an effort to develop an understanding of other backgrounds, experiences and beliefs. However, we are entirely intolerant when it concerns the accuracy and precision of our track alignment systems, tools and the quality and safety of our work.

We are open to new ideas and believe that to stand still, is to fall behind. We offer our clients the latest and most sustainable solutions and remain responsive and flexible in order to remain the leader in technology and innovation.
We continue to impress our customers with the high level of products and services we offer. We can only achieve this by consistently and relentlessly working to maintain and even increase this level. Our goal is to be the industry and world leader in everything we do.

We are a family business that is forward thinking, acting sustainably and is financially independent. Our conscious handling of opportunities and risks as well as in-depth knowledge of the market ensure long-term profit and growth, which makes us a reliable partner and employer.

We believe that

Quality

enhances

Safety

We continue to impress our customers with the high level of products and services we offer. We can only achieve this by consistently and relentlessly working to maintain and even increase this level. Our goal is to be the industry and world leader in everything we do.
Rhomberg Rail is part of the Austrian-Swiss based Rhomberg Sersa Rail Group (RSRG). When Rhomberg and Sersa merged in 2012, RSRG was established. Today, RSRG is a leading European railway service supplier generating an annual turnover of 430 M € through activities in more than 8 countries on 3 continents and with more than 2000 employees.

1.1 Member of Rhomberg Sersa Rail Group

Rhomberg Rail, with head office in Austria, is the group member that focuses mainly on permanent way construction projects worldwide – sharing the longstanding experience gained in slab track construction projects with the world, including electrical infrastructure installations and tunnel refurbishment activities.

The Rhomberg Sersa Rail Group management consists of the Owner Board and the Group Management team and are jointly responsible for the management of the company’s business. They provide guidance to the group and give strategic direction, whereby ensuring sustainable long-term interests and prioritization of investments.

1.2 Organization & Key Figures

Rhomberg Sersa Rail Group

Management and organisational structure

<table>
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<th>Rhomberg Sersa Rail Group Owner Board</th>
</tr>
</thead>
<tbody>
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<td>CEO</td>
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</table>

| Innovation | CTO |

| Germany | Switzerland | Austria | Projects | Australia | Ireland | UK | Canada / N. America |

<table>
<thead>
<tr>
<th>Rhomberg Rail (Austria) Railway Construction</th>
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<th>Rhomberg Rail (Germany) Electrical</th>
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<th>Rhomberg Rail (International) World Track Projects</th>
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<tr>
<th>Rhomberg Rail (Switzerland) Tunnel Maintenance</th>
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A success story

1886
Establish Rhomberg Group in Bregenz

1948
Establish Soudage électrique des rails S.A. (SERSA)

1999 – 2009
Establish Sersa Germany and subsidiaries in the Netherlands, UK, Ireland and Canada

2012
Merge with Sersa Group to form Rhomberg Sersa Rail Group

1992 – 2005
Acquire BBW and expand railway infrastructure activities. Acquire Track Australia

2012
Merge with Sersa Group to form Rhomberg Sersa Rail Group
Each and every one of our motivated staff is committed to the Rhomberg Rail company vision and making the values part of daily business. These show where we come from, how we take decisions and how our activities contribute towards sustainability. Our company values, ethical and legally impeccable behavior are reflected in our Code of conduct and supported by the Compliance principles manual.

**Vision**

- **Think** in terms of the benefit of customers and stay the preferred competent partner that can carry out infrastructure projects and maintenance of existing infrastructure during the entire life-cycle; and offer services and products that meet sustainable quality standards.
- **Live** the company philosophy when facing challenges in the markets and projects, continue to educate, train and grow employees and build on exemplary management qualities, which fosters the position as an attractive employer with proactive and motivated employees.
- **Have** a pro-active approach towards opportunities and risks and offer sustainable knowledge securing long-term results.

**Values**

- Innovation
- Performance
- Dynamic
- Safety
- Transparency
- Efficiency
- Reliability
- Trust
- Tolerance
- Quality
Full-service provider - Rhomberg Rail GmbH is a full-service provider of rail projects and looks back on a history of installing more than 650 kilometres of various slab track systems across Europe, making Rhomberg an industry leading company for slab track projects.

A wide range of project applications and services are offered; from green field slab track projects to tunnel refurbishment and electrification projects. Primarily, but not limited to European markets; and to a large extent in the role as General Contractor.

General Contractor for large projects

A vast experience in project management have been acquired through the role as General Contractor on several European flagship rail projects (among others, Lötschberg CH, Brenner access tunnel AT, and many other large-scale projects) but also projects outside our local markets; such as Bybanen in Bergen Norway, Citytunnel Malmö, and the currently on-going Metro project Cityringen/Sydhavn in Copenhagen.

Rhomberg Rail is an international player with global reach, having both companies and projects around the world!
Self-performance and Management are 2 very important aspects for delivering successful customer projects.

The emphasis on self-performance and the use of highly experienced staff means more than just management. It is the ability to (out-)perform and strengthen control over projects, schedule, quality, safety and budget. It also gives flexibility to alter processes in order to mediate or avoid risks (e.g. logistics, materials and environmental impact), optimize time schedules, etc.

Our Project Management is also a guarantee for quality, allows for high expectations as to how projects are executed, reduces risks and misunderstandings and ensure continuity in performance.

Wherever possible, local staff are invested in, because of their cultural understanding and experience. It is key to ensure that legislative regulations, labour market requirements, health, safety as well as environmental aspects and requirements are met sustainably. The project management teams have a good understanding of local requirements and know-how to incorporate this into the final execution.

Products & tools - the experience gained from many projects have been used to continuously strive for creating better solutions - solutions that are more efficient, more economical and providing higher quality.

Today a portfolio of products, particularly around slab track installations have been developed; IVES is a Rhomberg proprietary slab track.
20 Years of seamless installation of slab track projects cover both light rail projects in main cities across Europe (refer to list contained in Reference chapter); and also include several European flagship projects such as: Brenner north approach tunnel (35 km/71 km), Lötschberg tunnel (35 km/70 km), Zürich Cross city link (4.5 km / 9 km), Nuremberg – Ingolstadt (35 km) and currently under construction: Ulm-Wendlingen (60 km/120 km) and Geneva’s CEVA tunnel (9 km /17km).

The service delivery track construction spectrum is assessed to fit customer needs

Rhomberg Rail’s focus is to act as Prime / General Contractor, but also being versatile to act as sub-contractor for specific track infrastructure work packages and offering consulting services.

- We have expertise to manage the entire project as Prime Contractor.
- We offer management of specific work packages such as:
  - Project Management,
  - Slab track installation
  - Surveying and track alignment,
  - Concrete-related works,
  - Logistics
  - Refurbishment
- We are an innovative contractor developing solutions for/ with customers
- We provide consulting services
- We provide technical support at construction sites
- We develop specialised products that have proven themselves in the industry.

As a full service provider Rhomberg Rail covers the following segments:

- **Track Construction**
  - Slab track
  - Ballast track
  - Cover of segments: High Speed Lines, mainlines, metros, light rail, long distances, etc.

- **Tunnel Refurbishment**
  - Arch refurbishment profile
  - Enlarge tunnel profile
  - Drainage
  - Cable ducts
  - Track refurbishment (under operational conditions)

- **Electrification**
  - Electrical Installations
  - Traction & auxiliary power supply
  - Electromechanical equipment
  - Communication technology

- **Products & Services**
  - IVES
  - V-TRAS
  - HandrailIT
  - Diagnostics
  - RhoTAS
  - Rail Consultation

2.1 Track Construction

Rhomberg Rail covers both slab track as well as ballast track projects.

Slab track is a type of permanent way infrastructure where the traditional ballast bed is replaced by a rigid concrete track (such as slabs, in-situ concrete or pre-fabricated units, etc.)
The concrete track transfers the load to provide stability to the track. With the use of elastomeric components such as pads, bearings and/or springs, resilience is introduced into the rigid track structure. From an environmental life-cycle perspective, slab track systems are more sustainable due to the long design life as well as the low maintenance requirements associated with slab track systems.

Rhomberg Rail – the leader in slab track, has successfully completed numerous large slab track projects across the world. And although having a renowned slab track record, we do not limit ourselves to ballastless track only, we also build conventional/traditional ballast track and perform maintenance work on open track and refurbish railway tunnels. Calling on years of not only theoretical, but practical hands-on knowledge in various types of slab track, this has paved the way for quite a number of innovative developments in ballastless track construction, the latest being Rhomberg’s own IVES slab track system and the V-TRAS for ballast/slab track transitions.

With the focus on sustainability and through experience we understand that restricted or residential areas require solutions with minimal disruption to the public and the environment. We also know how to face challenges of maintaining high productivity, whilst considering the safety of the local population, infrastructure and own staff. It is also essential to avoid, where possible, disruptions to public travelling and to transport networks.

Rhomberg Rail is completely systems-independent and has extensive experience with all major slab track systems dating back to 1999. These systems were installed at various sites across the world and are today still in their original state in operation, which reflects the quality of workmanship that is guaranteed by our name.

Whether involved in mainline infrastructure, light rail tram systems, urban networks or underground railways, we have the necessary expertise to tackle the requirements associated with construction or remodelling – particularly in geographically sensitive and demanding situations.
The wide variety of slab track systems and slab track applications installed by us are listed as:

- **Monolithic** - Track systems with sleepers / supporting blocks firmly placed in in-situ poured concrete (Examples installed by Rhomberg Rail: Rheda 2000, Rheda City)

- **Embedded boots** - Track systems with elastically encased sleepers / supporting blocks firmly placed in in-situ poured concrete (Examples installed by Rhomberg Rail: Low Vibration Track (LVT) – Sonnevile, Edilon Sedra)

- **Continually supported track assembly** - Track systems with sleepers / supporting blocks borne directly on a track slab of either concrete or asphalt (Examples installed by Rhomberg Rail: IVES, Getrac A3)

- **Pre-fabricated concrete units** - Track systems consisting of pre-fabricated concrete slab track elements / units / plates (Examples installed by Rhomberg Rail: Porr (previously the Austrian Federal Railway (ÖBB) standard construction system), Bögl, LVT)

- **Direct fixation with single support points** - Track systems anchored with single supporting points in in-situ concrete (Examples installed by Rhomberg Rail: Vossloh and Pandrol fastenings)

- **Embedded rail systems** - Track systems where rails are continually embedded / supported in in-situ concrete or in pre-fabricated track slabs. Mainly used for tram lines (Examples installed by Rhomberg Rail: Edilon Sedra, QTrack)

2.2 **Tunnel Refurbishment**

Railway tunnels are particularly prone to problems, the older the tunnel, the more extensive the refurbishment and know-how. Our expertise covers:

- Widening the tunnel’s inside diameter to increase tunnel clearances
- Track infrastructure installation, drainage and other installations and
- Safety upgrades associated with refurbishment.

Rhomberg Rail has all the appropriate experience and specialist expertise to carry out refurbishment, modernisation and safety enhancement projects within railway tunnels – even under the severest of conditions. Our versatile track-bound mechanised equipment such as the Tunnel profile & widening unit as well as the Track dismantling & removal unit enable the widening of existing tunnel clearances as well as high performance machines for the removal of ballast track from inside the tunnel.

The modernisation of railway tunnels involves mainly the replacement of ballast track with slab track, if necessary even a mass-spring system. What started many years ago with the Arlberg tunnel refurbishment project, has developed into one of our niche competencies as we are considered the best tunnel refurbishment company in Europe.

Placing a high emphasis on safety, the refurbishment of tunnels are more than often done under operational conditions with trains passing our work-teams at tremendous speeds. The use of a specially designed temporary tunnel shield ensures the protection of staff inside the tunnel and also avoids disturbances when exact inner tunnel diameter clearances should be achieved.

Some of our largest tunnel refurbishment contracts are: Gletschersas (CHF 7 million), Simplon, Bruggwald, then also Rekawinkel, Magnacun, Heitersberg and the new Albula tunnel. The majority of the tunnel refurbishment projects are in Switzerland, where we have established quite a name for ourselves in this niche market.
Rhomberg Rail has continued to grow and develop the field of electrical infrastructure, which complements the services rendered in order to offer rail clients an even larger spectrum. Specialising in the entire range of 50 Hz technology – from High-Voltage distribution stations, switch point (turnout) heating systems and track illumination to railway station infrastructure. The installation activities include the installation of network stations inside existing buildings or in prefabricated concrete structures, which can be remotely operated, also mastpoles and low-voltage distribution networks.

The installation of safety equipment, uninterrupted power supply (UPS) units and switching systems also form an integral part of the electrical infrastructure construction spectrum.

**Electrical infrastructure & systems**

**Our expertise in the field of electrical infrastructure and systems**

- Electrical Installations
- Traction & Auxiliary power supply
- Electromechanical equipment
- Communication Technology

**Electrotechnical equipment (50 Hz)**

We install complex components of electrotechnical infrastructure alongside the rail. Starting with the design of High, Medium and Low voltage grids for the supply of power to railway stations, control and safety systems, industrial buildings and facilities. We install the required transformer stations with switching systems and wiring installations.

**Electrification**

Overhead contact wire - irrespective if these need to be newly installed on local or long-distance transport lines or being inspected for maintenance, require the latest generation of lift and crane machines, inspection and maintenance vehicles, all of which contribute to increase in the efficiency of overhead wire installation.

**Control systems and safety installations**

The safe and efficient operation of railways require all the components of control and safety technology to work effectively. Our range of control systems include switch point drivers, train detection systems, level crossing components, ETCS* equipment (GSM-R** equipment, etc.) and tunnel control systems (such as doors, lighting, ventilation, pumps, evacuation systems, etc.).

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* GSM-R: Global System for Mobile Communication-Rail
** ETCS: European Train Control System
2.4 Products, Services & Innovation

Products/tools are part of our innovative organizational spirit. Strongly encouraged by entrepreneurial and innovative thinking, the organization continues to invest and develop new technology that help us create value for customers and improve safety and eases work processes.

Products and tools contribute to the optimization of construction activities – mainly for the installation of slab track (as well as for ballast track). However, for slab track it is more important because the competence is more proprietary, and accuracy and precision are more demanding factors.

IVES

Intelligent Versatile Efficient Solid

For slab track installation, Rhomberg Rail has lately developed an own in-house slab track system, IVES.

IVES stands for intelligent, versatile, efficient, solid. All these characteristics are embodied in this integrated concept, which is based on an analysis of the advantages and disadvantages of various long-term tested slab track techniques.

The development of the IVES slab track solution is one example that shows Rhomberg Rail’s experience in many different slab track projects, totalling more than 650 kilometers. Having had the opportunity to install a variety of systems such as Rheda, LVT, ÖBB-Porr, embedded track systems, etc., provided the basis for understanding problems and challenges involved in current technology.

From project design to track installation, alignment and final survey, IVES combines the best of already existing systems:

- by eliminating in-situ concrete as a core aspect and high level pre-fabricated elements.

A further addition to the installation innovations of Rhomberg Rail, is the RhoTAS (Rhomberg Track Adjustment System) to ensure accurate slab track adjustments of the skeleton track and is slab track system independent.

Load capacity
The load capacity requirement decreases as the stress from the railway loads decrease from the top downwards.

Amount of work
The amount of work involved in building the track decreases from the bottom upwards.

Accuracy
The influence of manufacturing accuracy on vehicle track guidance decreases from top downwards.

Overall quality
The requirements for overall quality are consistently fulfilled.

IVES
Link to the video: https://youtu.be/WTWTDvBioeY
Ever experienced problems with transitions from traditional ballast onto slab track or vice versa and having had to invest in intensive maintenance? Rhomberg Rail offers a lasting solution with the V-TRAS.

The V-TRAS transition is a prefabricated, robust ladder-form steel structure that ensures an even distribution of differential settlements in sub- and superstructures. One side of the V-TRAS rests on the end of the slab track, while the rest of the structure (with a length depending on the specific project), is placed in the ballast roadbed, which provides it with a floating support.

Once installed, it is completely embedded in the ballast below the grid and therefore ideally integrated into the track superstructure and no further measures are required.

This holistic solution for a smooth transition can be used for all types of slab track and is independent of the entire track construction.

**V-TRAS**

Advantages of pre-fabrication quality
Compensation of settlements in both: super- & substructure
Independently usable on any kind of slab track type
Durable & reliable structure properties
Unrestricted involvement in additional track equipment

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**handraiLIT**

The modern, cost-effective orientation and guidance system, handraiLIT for railway tunnels and other applications is a handrail with integrated orientation lighting.

Due to its low maintenance requirements and compliance with all applicable standards and railway regulations, not to mention certified by the Austrian Federal Railway (ÖBB), the handraiLIT is without a doubt an excellent long term investment in tunnels.

The robust design with an IP65 protection rating and built-in redundancy of the power feed arrangement guarantees consistent lighting – even in the event of redundant power supply.

Showing the agility of the technology, it leans itself to the application of not only linear lighting, but also point lighting and recess & emergency lighting as well.

**handraiLIT Facts**
- High-quality stainless steel segments up to 2.20 metres long
- Simple and fast installation
- Equipped with single colour or RGB-LEDs
- High-quality plug-in connections and cable entry points with safety class IP68
- Fire retardant and halogen-free materials
- Double-insulated and halogen-free cabling
- The latest LED technology with numerous lighting variants
ZOKA

Access Location
Monitoring Alarm

Experience in the management of large construction sites, has exposed Rhomberg Rail too often to risks like unauthorized access, human safety, failing power supply, lighting, vehicle/asset detection and the lack of constant communication. These lead to the innovative solution ZOKA, managing and mitigating risks associated with construction sites – even in the deepest and longest of railway tunnels.

In the central monitoring control centre all the various information are brought together, in order to obtain an overview of the entire construction site. The system can also issue new authorized restrictions and warning signals, enhanced by various alarm options. ZOKA is built on the foundation of risk management and safety.

Rhomberg Rail has a vast experience in rail projects and the reference list includes some of Europe’s flagship rail projects, such as Lötschberg Tunnel, North approach to the Brenner Base tunnel in the Lower Inn valley in Austria (Zulaufstrecke Brenner Nord, Unterinntal) and CEVA in Geneva (which is currently still under construction).

The following references are an extract of our complete list and a selection of the most important projects. The projects serve to reflect the broad range of segments and markets of activities – from high-speed mainlines in Austria and Germany to major tunnel projects in Switzerland, Austria, Sweden, etc. as well as urban metro and light rail in Germany and Scandinavia.

Knowing who and what are where and when. Automated access to people and vehicles in allocated zones, supported by 24 hour video surveillance and monitored centrally. Reliable communication networks for telephones, radios and data for uninterrupted communication is a significant safety feature, enhanced by various alarms that distinguish emergency levels. Appropriate power supply addressed by medium and low voltage installations. Lighting solutions ranging from normal fluorescent tubes to the most modern and sophisticated LED technology – lighting the way, wherever you are.
Vast experience

Due to the many advantages of slab track, such as increased reliability, increased availability, high speed operation and reduced construction depth (dead load), more and more clients nowadays opt for the installation of slab track.

Rhomberg Rail is without a doubt the preferred choice when clients do decide on the installation of slab track. Our incomparable slab track record gives customers a glimpse of the vast experience in all the different slab track construction types and we are confident to provide each customer with a tailor-made solution.

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Major / Prime Contractor projects

Prime Contractor (Listed according to construction value)

<table>
<thead>
<tr>
<th>Project</th>
<th>Value</th>
<th>Construction period</th>
<th>Client</th>
<th>Track segment</th>
<th>Slab Track</th>
<th>Ballast Track</th>
<th>Tunnel</th>
<th>Catenary</th>
<th>Traction</th>
<th>Low Volt</th>
<th>Telecom</th>
<th>Other equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lötschberg Base Tunnel/CH</td>
<td>CHF 950m</td>
<td>2002 – 2007</td>
<td>SBB</td>
<td>ML</td>
<td>LVT</td>
<td>57km</td>
<td></td>
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<tr>
<td>2 Brenner North Approach/AT</td>
<td>€ 370m + € 46m (Electrical)</td>
<td>2009 – 2012</td>
<td>ÖBB</td>
<td>ML</td>
<td>Port</td>
<td>71km</td>
<td></td>
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<tr>
<td>3 Windhoek – Lüderitz/DE</td>
<td>€ 350m + € 60m (Electrical)</td>
<td>2009 – 2020</td>
<td>DB</td>
<td>ML</td>
<td>Rheda City</td>
<td>150km</td>
<td></td>
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<tr>
<td>4 CDW/CH</td>
<td>€ 250m (Electrical)</td>
<td>2018 – 2019</td>
<td>SBB</td>
<td>ML</td>
<td>LVT</td>
<td>16km</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>5 DNL/Zürich/CH</td>
<td>CHF 41m</td>
<td>2002 – 2013</td>
<td>SBB</td>
<td>ML</td>
<td>LVT</td>
<td>9km</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>6 Copenhagen Metro/DK</td>
<td>€ 30m</td>
<td>2018 – 2023</td>
<td>Copenhagen Metro</td>
<td>Metro</td>
<td>LVT</td>
<td>9km</td>
<td></td>
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</tr>
<tr>
<td>7 Bydgoszcz – Szczecin/PL, Phase 3</td>
<td>€ 91m</td>
<td>2016</td>
<td>Bydgoszcz</td>
<td>Urban</td>
<td>LVT</td>
<td>30km</td>
<td></td>
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</tr>
<tr>
<td>8 City Tunnel Malmo/DE</td>
<td>€ 170m</td>
<td>2009 – 2010</td>
<td>Traffic</td>
<td>Urban</td>
<td>NL</td>
<td>15km</td>
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<td></td>
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</tr>
</tbody>
</table>

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Light Rail

Light Rail Projects (Listed alphabetically)

- Bergen / Norway
- London / UK
- Stockholm / Sweden
- Berlin / Germany
- Malmö / Sweden
- Stuttgart / Germany
- Cologne / Germany
- Melbourne / Australia
- Toronto / Canada
- Copenhagen / Denmark
- Munich / Germany
- Vienna / Austria
- Istanbul / Turkey
- Perth / Australia
- Zurich / Switzerland

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Slab Track

Slab Track Projects (Listed according to value)

<table>
<thead>
<tr>
<th>Project</th>
<th>Value</th>
<th>Construction period</th>
<th>Client</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hohenthurm</td>
<td>€ 80m</td>
<td>2017 – 2018</td>
<td>DB Netz AG</td>
<td>Getrac A3</td>
</tr>
<tr>
<td>2 General Freight Bypass (GZU)</td>
<td>€ 15m</td>
<td>2015 – 2017</td>
<td>ÖBB Infrastruktur AG</td>
<td>ÖBB-PORR</td>
</tr>
<tr>
<td>3 Bruggad Tunnel</td>
<td>CHF 3m</td>
<td>2018</td>
<td>SBB</td>
<td>IVES</td>
</tr>
<tr>
<td>4 Cologne Stdtbahn LRT</td>
<td>€ 5.2m</td>
<td>2011 – 2015</td>
<td>Kölner Verkehrs Betriebe</td>
<td>Rheda City</td>
</tr>
<tr>
<td>5 Heitersberg Tunnel</td>
<td>€ 4.2m</td>
<td>2014 – 2015</td>
<td>SBB</td>
<td>LVT</td>
</tr>
<tr>
<td>6 Munich Bahn FT LRT</td>
<td>€ 2.8m</td>
<td>2013</td>
<td>SBB</td>
<td>LVT</td>
</tr>
<tr>
<td>7 Munich FT LRT</td>
<td>€ 1.8m</td>
<td>2014</td>
<td>SBB</td>
<td>LVT</td>
</tr>
<tr>
<td>8 Stockholm Citybanan</td>
<td>€ 1.5m</td>
<td>2015</td>
<td>Strukton Rail AB</td>
<td>LVT</td>
</tr>
</tbody>
</table>

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Tunnel Refurbishment

Tunnel Refurbishment (Listed according to construction period)

<table>
<thead>
<tr>
<th>Project</th>
<th>Value</th>
<th>Construction period</th>
<th>Client</th>
<th>Track segment</th>
<th>Slab Track</th>
<th>Ballast Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bruggad &amp; Goppenstein Tunnel</td>
<td>CHF 3m</td>
<td>2018</td>
<td>Schweizerische Stadtbahn AG</td>
<td>ML</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Glattal Tunnel</td>
<td>CHF 10.5m</td>
<td>2014 – 2016</td>
<td>Rhätische Bahn</td>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Rekawinkel Tunnel</td>
<td>€ 12.6m</td>
<td>2016</td>
<td>ÖBB</td>
<td>LVT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Heitersberg Tunnel</td>
<td>CHF 4.5m</td>
<td>2014 – 2015</td>
<td>SBB</td>
<td>ML</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Simplon Tunnel</td>
<td>CHF 36m</td>
<td>2002 – 2004</td>
<td>SBB</td>
<td>ML</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Arberg Tunnel</td>
<td>CHF 10m</td>
<td>2005 – 2010</td>
<td>ÖBB</td>
<td>ML</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17

Electrification

Electrical Works (Listing according to value)

<table>
<thead>
<tr>
<th>Project</th>
<th>Value</th>
<th>Construction period</th>
<th>Client</th>
<th>Track segment</th>
<th>Medium Voltage</th>
<th>Low Voltage</th>
<th>Telecom</th>
<th>Other equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Windhoek – Lüderitz/DE</td>
<td>€ 60m</td>
<td>2018 – 2020</td>
<td>ÖBB</td>
<td>ML</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 VEB Linz NER Elektr.-Netz GmbH</td>
<td>€ 10m</td>
<td>2013 – 2015</td>
<td>BLS Nett AG</td>
<td>NL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Rosskam Tunnel</td>
<td>€ 10m</td>
<td>2019 – 2020</td>
<td>BLS Nett AG</td>
<td>NL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Simplon Tunnel</td>
<td>€ 7m</td>
<td>2015</td>
<td>SBB</td>
<td>NL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Frame work contract</td>
<td>€ 17m</td>
<td>2014 – 2017</td>
<td>NL</td>
<td>NL/Urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Erzingen – Beringen/DE</td>
<td>€ 5.5m</td>
<td>2014 – 2017</td>
<td>NL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In order to professionally manage and execute projects worth hundreds of millions of euros, experienced staff is key. Rhomberg Rail has highly specialized project management staff and a high percentage in comparison to the Rhomberg Sersa Rail Group. By keeping key people on board, we have been able to maintain relatively stable staff figures, which contribute to sustainable development, internal know-how and competence combined with valuable experiences from projects.

Learning and sharing tools, training, methodologies, processes, etc. support the teams in delivering high quality projects, also focusing on developing competence and know-how.

**Human Capital**

4.1

**Multi-skilled**

Rhomberg Rail has a history of using multi-skilled field staff to drive down costs and improve efficiency. This includes:

- Use of qualified technicians, electricians, mechanics, and foremen. This wide variety of expertise is integrated into the daily operations and also reduces downtime in the event of a breakdown on site.
- Combining skills of our Engineers (spectrum covering Project Managers, Site Managers, Survey Engineers, Electrical and Commercial Engineers), Technicians, Surveyors, Project estimators, Controllers, Foremen, System Developers and other technical staff, we constantly deliver only the best work practices in a sustainable way.

**Training and continuous development**

Inexperienced staff are integrated into experienced work teams to improve skills and build specific competencies, whereby learning and sharing are part of the Rhomberg organizational values. This has led to considerable success in growing teams faster and with higher performance and safety results. Furthermore, input, new ideas and new perspectives from “outside” resources also have a chance to be integrated into project execution as a continuous improvement process and learning.

**Machines & Equipment**

The Rhomberg Sersa Rail Group (RSRG) owns, operates and maintains one of Europe’s largest fleets of on-track machines. The main machines and equipment used for traditional ballast track, available to Rhomberg Rail, from RSRG sister companies across Austria, Switzerland and Germany, such as Bahnbau Wels (Austria), JumboTec (Germany), Sersa (Switzerland), etc.

RSRG is accredited in Austria and Switzerland for ECM (Entity in Charge of Maintenance) of rolling stock, EU Regulation 445/2011). Maintenance is based on the ECM and considers specific European/national regulations and manufacturing specifications.

The track construction machines of the Rhomberg Sersa Rail Group all represent the current state of technology. Our customers can count on us that whatever their specific construction demands, we always find individual and suitable solutions.
EcoVadis

Rhomberg Rail is EcoVadis GOLD rated. The achievement, covering 21 criteria across four themes: i) Environment, ii) Fair labour & human rights, iii) Ethics and iv) Sustainable procurement, is based on being ranked in the top 5% percentile of how well a company has integrated the principles of Corporate Social Responsibility (CSR) Practices into its business and management systems.

The methodology is built on international CSR standards including the Global Reporting Initiative, the United Nations Global Compact, and the ISO 26000, covering 190 spend categories and 150 countries.

We integrate the individual elements of sustainability and we acknowledge the effects, correlations, and inter-dependencies and search for an overall optimized solution that will ensure the best sustainable fit for the future.

We grow in all three fields through innovation, because each element has the potential to impact another. This can be achieved through holistic solutions - striking the best possible balance between customer requirements, the market, society, and our employees.

We balance quality, functionality, comfort, durability and flexibility by weaving these into our construction activities.

We cultivate in all our business relationships, a cooperative approach and aim for long-term, lasting relationships. Our company culture and our management style provide time and space for our employees to develop creative and innovative solutions.

Striving towards continuous improvement of our ecological impact and avoiding environmental pollution. In order for us to meet this commitment, we:

- Ensure compliance with relevant legal and other requirements
- Reduce the environmental impact of our activities from the earliest stage possible,
- Reduce emissions and pollution by improving waste management practices
- Reduce consumption of natural resources - procure resources locally where possible
- Minimise noise and other nuisances
- Involve, motivate and create awareness, encourage and monitor suppliers and sub-contractors to achieve the same environmental objectives

We guide through our ethical & legal roadmap (Compliance Guidelines) - fair, open and ethical behavior among colleagues and towards business partners, suppliers & competitors.

The Rhomberg Rail Sustainability Model

Characterized by providing sustainable solutions to customers, the Rhomberg Rail business model focuses on three main areas: Environmental footprint, Social footprint and Economic footprint.

5.1 Environmental

Planning for tomorrow.

Striving towards continuous improvement of our ecological impact and avoiding environmental pollution. In order for us to meet this commitment, we:

- Ensure compliance with relevant legal and other requirements
- Reduce the environmental impact of our activities from the earliest stage possible,
- Reduce emissions and pollution by improving waste management practices
- Reduce consumption of natural resources - procure resources locally where possible
Rhomberg Rail could see significant reductions from efforts maintained as figures dropped significantly in 2017.

The total CO2 figure for 2017 was 760.421 kg and we will still continue in striving towards decreasing this figure.

Effective implementation and compliance with the Environmental Management System (EMS) enables us to demonstrate our commitment to ISO 14001 in applying due diligence to all our operational activities.

ISO Certifications

In a global marketplace, the checks and balances need to be in place. Being ISO certified shows that a company’s management system, processes, services and documentation procedures are consistent in order to ensure quality across industries and nations.

Rhomberg Rail is ISO compliant and certified in the following fields:
- ISO9001- Compliance
- ISO 9001- Quality
- ISO 14001 - Environment

Embracing diversity and non-discriminative

Quite evident of embracing differences in order to enhance our workplace, is the Rhomberg Rail diverse workforce, joining the company from more than 11 different countries, representing 4 continents and covering a spectrum of at least 7 languages!

Investing in employees

- Employee Manual covers principles, image, company values
- brainTrain - a web-based online knowledge and training platform, accessible any time by all staff across the globe and optimising direct costs associated with continuous development.
- Individual Skills Profile and Personal Development Path. We have had considerable success in blending inexperienced members into our work teams to improve skills and competency of our staff.
- Fair and equal treatment of employees, customers and networks.
- International laws and regulations we apply the same principles to business partners.
- Substance, alcohol and drug abuse, human rights and sexual harassment are covered by our Code of Conduct and Management Policies.
- Invest in Public safety organisations and our own Employees by sponsoring and focusing initiatives promoting energy-consciousness, environmental-awareness as well as social and cultural interaction.

Safety culture

We are committed to comply and value each and every life.
We are aware of our responsibility regarding the health and safety, involving training, handling of equipment, dangerous situations, increasing awareness and personal protection equipment.
We ensure that working conditions are beneficial to health. Our OHSAS 18001 health and safety at work management system is annually reviewed by an external body.
We care about the health of our employees and promote a healthy work-life balance.
True to the definition of risk - the probability of appearance multiplied by the consequences - the health, safety and welfare of employees and subcontractors depend on making conscious decisions affecting personnel, vehicles, machines, equipment, and other assets as well as processes and procedures. The next chapter discusses Rhomberg's conscious management of risk and the awareness of safety in more detail, because we believe that safety enhances quality - from which not only we, but also our customers can benefit.

5.3 Economical

Risk management

We believe in fair gain.
- Observe laws and regulations
- To be fair, respectful and trustworthy in all activities and business relationships,
- Respect and foster the reputation of the Rhomberg Sersa Rail Group,
- Ensure compliance in order to maintain transparent business relations.

We believe in ethical behaviour.
Our ethics and governance make us a trusted partner for business and for society and we pride ourselves in being a sustainable partner in the Supply Chain and share value in the communities where we work. There are many forms of corruption and all these cause major distortions of competition, therefore we are scrupulous in the application of legal requirements, supported by our Code of Conduct and other detailed company policies, we set these as our Business Ethics' Foundation.

We believe in quality.
Providing our customers with only the best quality, assisting in finding solutions beneficial to our customers, that are holistic and sustainable through:
- Life-cycle optimization
- Expanding rail life (e.g. the application of our V-TRAS)
- Continuously improving the benchmark, as standard.

Presenting our customers with precision that can be measured is more than just being ISO certified - it is values like the dedication and attention to detail, that cannot be so easily measured, but are just as important to us as all our other values.

Behaviour towards customers, suppliers and competitors entails honesty and sincere contact with customers in order to deliver a high quality product and service. Our interaction with customers is transparent and fair - based on correct and truthful statements regarding the quality, availability and features of products and services.

The safety and comfort of passengers demand absolute precision of the track geometry and positioning. Achieving these objectives require state-of-the-art measuring systems and efficient, cost-effective construction methods based on innovative technologies, high-performance machinery and well-planned systematic processes.

Our projects all include regular as well as random quality checks. We collaborate closely with research institutions like e.g. universities and other testing institutions to assist us in ensuring that our customers receive only the best and promised quality.
Forming an integral part of the Rhomberg Rail sustainability culture, are the health and safety of our employees, our clients & subcontractors, the public, assets and our impact on the environment.

We are committed to comply with current laws and our vision and actions are focused on the long-term future of the company and employees. We value each and every life and we consider ourselves honoured to be working with trained and professional staff. Rhomberg Rail is committed to a safety culture and management (elimination of work-related injury and illness through prevention, legislative compliance, consultation and accountability at all levels) to ensure optimum safety for all stakeholders.

We ensure that working conditions are beneficial to health and in this way strengthen the fitness and wellbeing of our employees and subcontractors at all levels. All employees should have a sense of responsibility for their own health and safety and for that of persons in their immediate working environment. Likewise, we request that our contract partners apply the same high standard with respect to health and safety at work. Our OHSAS 18001 health and safety at work management system is annually reviewed by an external body. In this way we ensure continuous improvement.

We care about the health of our employees and are aware that health problems often arise in the working environment - this is why together with our company physicians, we make an effort in making our everyday workday a healthy day.

Safety culture

We at Rhomberg Rail set forth demanding goals for ourselves and for those with whom we work with; we also continually strive for improvement and have aligned ourselves accordingly.

- “Zero-accidents” culture.
- Equip employees with only the latest safety equipment and protective gear.
- Digitalise our construction sites with the installation of the “Smart Safety System”.
- For tunnel operations, we use a mobile protective wall as an additional safety measure to protect our staff from bypassing trains and movable objects that may have life-threatening consequences.

We are aware of our responsibility regarding the health and safety of our workforce, contract partners and customers. For this reason we make large investments in order to guarantee maximum health and safety at work; this involves training, including the handling of equipment and dealing with dangerous situations, increasing awareness, and personal protection equipment.

Living a humanised safety culture.
Work-life balance

A well-balanced mixture of work and leisure time and the use of employees according to their strengths, have a high priority in our company. We have realized the importance of keeping a healthy work-life balance and have achieved this through flexible work models based on the needs of our employees, in which we are in turn rewarded with the highest level of their commitment and service.

Risk management

The definition of risk is the probability of appearance multiplied by the consequences.

Managing risks is a key task of us as a contractor and through experiences gained in various projects across the world and of various sizes, types and cultures, Rhomberg Rail has always stood steadfast in continuing this. Each of our projects undergoes a thorough risk analysis to establish the consequences of possible hazards. This is a golden thread that runs from the planning phase, construction phase, including logistics, occupations, dealing with defects, managerial changes and weather conditions to the successful handover of the project.

The health, safety and welfare of employees and subcontractors depends on making conscious decisions affecting personnel, vehicles, machines, equipment, and other assets as well as processes and procedures. Constant improvement of eliminating risks and mitigating where elimination is not possible, are done through regular reviews, recording, reviewing and proactively seeking to eliminate and mitigate potential issues / hazards / risks.

On a more practical level, we have regular safety talks, implement speed restrictions on site, manage access by means of the ZOKA access system. Emergency numbers, evacuation procedures and rescue equipment are visible and available at all times and form an integral part of our sustainable culture.

Certifications

Rhomberg Rail has implemented and continually improves our HSE and Safety management system, which also contains the effective and continuous training of employees and (sub-)contractors.

Our comprehensive Integrated Management System (IMS) emphasize quality and continuous improvement, safety, environmental protection, project management, employee management, data protection and is a platform where we record our processes. Regular plant and machine maintenance and deploying new technology take place according to our maintenance machine schedule.

- Management System as per OHSAS 18001:2007 - Safety
- Safety Management System as per EU Regulation 1158/2010
Digitalisation does not only make things easier, but also brings opportunities about. Recognizing that we can serve our customers much better, we are optimizing our processes and project management methodologies using the latest technology available, implementing Business Integrated Management (BIM).

BIM, often referred to as Virtual Design and Construction (VDC) is a collaborative working methodology having 7D digital models, giving us an edge to create, design, communicate, change and visualise quantity changes, retrieve new drawing sets and have a new understanding of what can be expected during the construction phase and operational phase of a project. It also means linking information over the entire life cycle in order to improve transparency, collaboration, documentation, estimation, scheduling and planning maintenance.

Implementing BIM as digitalisation best practice in the construction industry, entails the optimisation and transformation of 6 sectors:
- Organisational development,
- Design & modelling,
- Tendering,
- Engineering,
- Project execution and
- Operation & maintenance.

Rhomberg Rail believes that by using the latest technological tools, new opportunities for success are created. Being part of today’s technological possibilities, improves efficiency and benefits our customers for the future.